

Appl. No. 09/511,265  
Amdt. Dated January 29, 2004  
Reply to Office action mailed September 29, 2003

**Amendment to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

**Claim 1 (Currently Amended):** In a data switch including a plurality of interface modules, a method of forwarding a block of data comprising:

receiving a first packet in a first protocol via one of the plurality of interface modules;

translating the first packet into a generic format to create a generic packet having an associated descriptor for provisioning switch resource;

passing the generic packet to an application according to the associated descriptor of the generic packet;

processing the generic packet by the application ~~transparently of the first protocol;~~

receiving from the application the generic packet;

translating the generic packet into a second protocol to create a second packet; and

sending the second packet to an output port.

**Claim 2 (Original):** The method of claim 1 further comprising placing the generic packet into a receiving queue corresponding to a quality of service level of the generic packet.

**Claim 3 (Original):** The method of claim 1 further comprising receiving at a forwarding queue the generic packet from the application, the forwarding queue corresponding to a quality of service level of the generic packet.

**Claim 4 (Previously Presented):** The method of claim 1, wherein the sending comprises sending the second packet to a backplane, the second packet having a port address within a range reserved for a destination port.

**Claim 5 (Original):** The method of claim 4, wherein the destination port is selected from a group consisting of known internal unicast ports, known internal multicast ports, known external multicast ports, and dynamic multicast ports.

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**Claim 6. (Currently Amended):** A switching system comprising:

- an input port receiving a first packet in a first protocol;
- an input driver coupled to the input port for translating the first packet into a generic format to create a generic packet having an associated descriptor for provisioning switch resources;
- means for passing the generic packet to an application in conformance with the associated descriptor;
- means for invoking the application for processing the generic packet by the application transparently of the first protocol;
- means for receiving from the application the generic packet;
- an output driver for translating the generic packet into a second protocol to create a second packet; and
- an output port coupled to the output driver for transmitting the second packet.

**Claim 7 (Original):** The switching system of claim 6, wherein the input and output drivers register with a generic forwarding interface, the generic forwarding interface being located between the drivers and the application.

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**Claim 8 (Original):** The switching system of claim 6 further comprising a receiving queue for receiving the generic packet, the receiving queue corresponding to a quality of service level of the generic packet.

**Claim 9 (Original):** The switching system of claim 6 further comprising a forwarding queue for receiving the generic packet from the application, the forwarding queue corresponding to a quality of service level of the generic packet.

**Claims 10-11 (Cancelled)**

**Claim 12 (Currently Amended):** A switching system comprising:  
a plurality of drivers;  
a plurality of applications; and

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an interface coupled to the drivers and the applications, the interface configured to receive a first packet formatted in a first format from a first driver, translate the first packet to a second format having a descriptor to generate a second packet, and forward the second packet to one of the plurality of applications in accordance with the descriptor, the one of the plurality of applications being configured to process the second packet transparently of the first protocol.

**Claim 13 (Previously Presented)** The system of claim 12, wherein the application is a packet forwarding application.

**Claim 14 (new):** A method of processing packets in a data switch comprising a plurality of interfaces and switch resources, the method comprising the steps of:

receiving, via one of the plurality of interfaces, a first packet characterized by a first protocol format;

translating the first packet into a generic packet characterized by a generic format comprising a descriptor;

allocating switch resources to the generic packet in accordance with the descriptor;

translating the generic packet into a second packet characterized by a second protocol;

and

transmitting the second packet from at least one of the plurality of interfaces.

**Claim 15 (new):** The method of processing packets in claim 14, wherein the switch resource is Quality of Service (QoS).